

EXHIBIT 4

UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

In re CASSAVA SCIENCES, INC. Master File No. 1:21-cv-00751-DAE
SECURITIES LITIGATION

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This Document Relates To:

ALL ACTIONS

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VIDEOTAPED DEPOSITION OF
RENE M. STULZ, Ph.D.
NEW YORK, NEW YORK
THURSDAY, AUGUST 8, 2024

REPORTED BY:
DANIELLE GRANT
JOB NO.: 6831748

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1 become too distracting yet, but I
2 just want to please caution you.

3 MS. LOSEMAN: Counsel, I'll
4 object when I see fit.

5 MS. JENSEN: And I'm just
6 saying for the record they have
7 not been identical questions,
8 so --

9 MS. LOSEMAN: For the record,
10 they have been.

11 MS. JENSEN: We'll agree to
12 disagree.

13 Q Was every piece of information
14 that you believe supports your opinions
15 identified in your list of materials
16 considered, that being your Appendix C?

17 A Appendix C includes every
18 materials that I reference in my report on
19 the materials that I rely on for my
20 opinions referenced in my report. We
21 discussed earlier, two papers that were
22 part of my thinking, and I added those.

23 Q Okay. So with the inclusion
24 of the several articles that were added
25 yesterday, with that addition, did you

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1 include every piece of information now
2 that you believe supports your opinions?

3 MS. LOSEMAN: Objection.

4 Misstates.

5 Go ahead.

6 A I believe that they included
7 every materials that supports the basis
8 for my opinions.

9 Q What is the plaintiffs' theory
10 of liability in this case?

11 A I'm not an attorney. And so
12 I'm going to convey the understanding that
13 I received. I discuss in my report that
14 the plaintiffs allege that the stock was
15 inflated because of a number of
16 misstatements, alleged misstatements made
17 by the company. And I discuss these
18 misstatements early in my report. I
19 understand that the plaintiffs also allege
20 the existence of a scheme, and I say that
21 in my report as well.

22 Q You don't state that in your
23 summary of allegations, do you?

24 A I thought I had somewhere in
25 my report, but I'm aware of that.

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1 Q Just not in the summary of
2 allegations.

3 MS. LOSEMAN: Object to form.

4 Q What is your understanding of
5 the fraudulent scheme that is alleged?

6 A That it was an attempt to
7 misrepresent the value of simufilam,
8 S-I-M-U-F-I-L-A-M.

9 Q And in brief, what is your
10 understanding of the alleged
11 misrepresentations and omissions in the
12 case?

13 A In my report, I put them in
14 four bins. I -- the class cert report,
15 put them in five bins, but they're closely
16 related to the four bins that I use.

17 There are misstatements
18 concerning the research in the trials.
19 There is misstatement concerning conflicts
20 of interest, misstatements concerning the
21 petition and the response to the petition.
22 There are misstatements concerning alleged
23 investigations by authorities.

24 Q And your misstatements
25 regarding the research and files, are you

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1 including the data manipulation in
2 those -- in that bin?

3 A So that bin includes issues
4 with the papers as well as issues with the
5 trials. The allegations of that
6 manipulation will be part of those
7 allegations.

8 Q Did you in drafting your
9 report -- strike that.

10 For purposes of your report,
11 did you assume that the plaintiffs'
12 allegations are true?

13 A That's correct.

14 Q Okay. Earlier we established
15 that all of your opinions are contained in
16 this report, and I would like to confirm
17 that your understanding of those opinions
18 is the same as mine.

19 So you have four -- you have
20 four opinions, correct?

21 A Correct.

22 Q First one being that
23 Dr. Feinstein's opinion about market
24 efficiency for Cassava stock is flawed; is
25 that right?

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1 A Yes.

2 Q The second being that
3 Dr. Feinstein's opinion about market
4 efficiency for Cassava options is flawed?

5 A Correct.

6 Q That certain -- third, certain
7 alleged corrective disclosure dates were
8 not statistically significant?

9 A I have that opinion.

10 Q And you disagree with Dr.
11 Feinstein's damages methodology?

12 A Correct.

13 Q Did I miss any?

14 A No.

15 Q Okay. So you critique
16 Dr. Feinstein's market efficiency opinion
17 in your report.

18 You're not offering an
19 affirmative opinion that the market for
20 Cassava stock was inefficient during the
21 class period, are you?

22 MS. LOSEMAN: Object to form.

23 A That's correct.

24 THE WITNESS: Sorry.

25 Q Okay. So just so you know --

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1 you know this. Just for a clear record,
2 just make sure you give Ms. Loseman an
3 opportunity to object.

4 A Right.

5 MS. LOSEMAN: Thank you.

6 Q It's not that I welcome the
7 objections, but I just want to make sure
8 that we have a clear record. Okay. Thank
9 you.

10 Okay. I want to make sure
11 that was -- yeah, it came through.

12 Are you offering an
13 affirmative opinion that the Cassava
14 options were inefficient during the class
15 period?

16 MS. LOSEMAN: Object to form.

17 A I am not.

18 Q How would you go about testing
19 empirically whether a stock is efficient?

20 A It's not a question I would
21 answer in general. I would have to learn
22 about the stock, and I would have to think
23 about issues that arise with the stock.

24 Q So there is no --

25 A I --

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1 Q -- there is no general --
2 generally accepted methodology in your
3 mind for how you test for the efficiency
4 of a stock?

5 A Well --

6 MS. LOSEMAN: Object to form.

7 A -- that's not quite right.
8 No. I mean, as I believe I say in my
9 report, the direct test of market
10 efficiency is how the stock incorporates
11 information. So I would have to focus on
12 how the stock incorporates information,
13 which typically you would at least start
14 looking at by looking at an event study
15 on -- you would have to think about what
16 kind of events you would want to look at,
17 and that would be dependent on the stock.

18 Q Typically, what kind of a
19 event study would you want to look at?

20 MS. LOSEMAN: Object to form.

21 A It would depend on the stock.
22 I would have to think about the stock.

23 Q Okay. Well, okay. Let's
24 take -- let's take Coca-Cola.

25 How would you go about testing

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1 in determining whether a stock trades in
2 an efficient market?

3 MS. LOSEMAN: Objection.

4 A Well, I'm not an attorney. I
5 have an understanding of some courts
6 looking at some factors. Some of those
7 would be often the Cammer factors and the
8 Krogman factors that Dr. Feinstein looks
9 at.

10 Q And yet you call into question
11 Feinstein's analysis of the Cammer factors
12 in this case, correct?

13 A I have a number of things to
14 say about those factors, you know, some
15 general and some specific to the work he
16 does for some of the factors.

17 Q You aren't making any
18 affirmative findings that the Cammer
19 factors are not met in this case, correct?

20 MS. LOSEMAN: Object to form.

21 Vague.

22 A I'm here as a rebuttal expert
23 to Dr. Feinstein, and I point out the
24 problems with his analysis. And so I
25 point out problems with Cammer factors and

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1 Krogman factors.

2 Q But you're not making an
3 affirmative finding that any particular
4 Cammer factor is unmet, correct?

5 MS. LOSEMAN: Object to form.
6 Vague.

7 A I don't have an affirmative
8 opinion on that factor is unmet. I
9 criticize him for the inferences he draws
10 from the factors, on what he looks at with
11 the factors, on the fact that he ignores
12 things related to the factors. So I
13 clearly have a lot of things to say about
14 that.

15 Q Likewise, you don't make any
16 affirmative findings that the Krogman
17 factors are unmet, correct?

18 MS. LOSEMAN: Objection.
19 Vague.

20 A So I just want to go back to
21 my answer. We have to distinguish between
22 stocks and options. My answer was correct
23 for the stocks. I mean, in the options,
24 he doesn't look at those factors, and so
25 obviously he can't say that they're met

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1 when he doesn't look at them.

2 Q Okay. So let's distinguish
3 here between you and Dr. Feinstein,
4 though. So I'm just asking about your
5 opinions. So you don't -- so thank you
6 for clarifying about the stocks. You did
7 not make any affirmative finding that the
8 Cammer factors were unmet as to stocks.
9 Likewise, as to options -- let's set aside
10 Dr. Feinstein.

11 You don't make any affirmative
12 findings that the Cammer factors are unmet
13 as to options, correct?

14 MS. LOSEMAN: Objection.

15 Vague.

16 A Both for stocks and options,
17 my report assesses the work that
18 Dr. Feinstein does on market efficiency.
19 Both for stocks and option, I -- my
20 opinion is that he hasn't shown that the
21 market for the stock or the market for the
22 options is efficient. That is the opinion
23 in my report.

24 Q Understood. You are
25 critiquing Dr. Feinstein's opinions as to

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1 MS. JENSEN: I'm going to move
2 to strike everything after "I
3 would agree."

4 Q In the Rocket case, you said:
5 There is no single formal or technical
6 definition of a meme stock.

7 Correct?

8 MS. LOSEMAN: And we oppose
9 the motion.

10 A I have a sentence in the
11 Rocket case that says that there is not a
12 consensus definition on -- I agree with
13 that. But it has been a bit misused.
14 Now, if I had to write it again, I would
15 write it differently in the sense that,
16 you know, when people construct lists of
17 meme stocks, there is a lot of overlap,
18 but it's not all necessarily the same
19 stocks, and that's what I was referring
20 to.

21 But as I just said, you know,
22 people who wrote papers on this all look
23 at common components of meme stocks, and
24 so in that sense, there is quite a bit of
25 consensus.

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1 Q You would say it differently
2 now that you have been the subject of a
3 motion to exclude based on it in that
4 case?

5 MS. LOSEMAN: Objection.

6 Argumentative. Misstates.

7 A No. I mean, I don't form my
8 opinions based on what people say about
9 them. I realized that it was a bit
10 misused because it gave the impression
11 that this was a big issue. But as I say,
12 information on efficiency has less of a
13 consensus than meme stocks have.

14 Q So I'm reading for your
15 report: There's no single formal or
16 technical definition of a meme stock.

17 Did you write that or not?

18 A Yeah.

19 Q Okay. Thank you.

20 And that was in December of
21 2023, correct?

22 A Yeah. And I -- I mean, agree
23 with that, that there is no -- but, no,
24 there isn't for most things in financial
25 economics. And so there is some judgment

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1 involved. No. I mentioned informational
2 efficiency. But if you talk about a value
3 stock, there is not a criterion that is
4 accepted by everybody. I mean -- so...

5 Q Doctor, with respect, I'm not
6 asking for, you know, any controversy that
7 may occur anywhere in the discipline or
8 field.

9 I'm just -- want to focus your
10 attention on meme stocks because that's
11 what we're talking about right now, okay?

12 MS. LOSEMAN: Objection to the
13 commentary. Argumentative.

14 Is there a question?

15 MS. JENSEN: I'm asking him to
16 focus on my question.

17 Q What is your definition of a
18 meme stock?

19 A So I -- I mean, I have a
20 discussion of that in my report. You
21 know, those are stocks -- and I have a
22 definition from -- I mean, I cite an
23 academic article that is in the Journal of
24 Financial Economics. You know, meme
25 stocks are stocks that generated a lot

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1 the return of a stock --

2 (Whereupon, the court reporter
3 requested clarification.)

4 THE WITNESS: Dominating the
5 return of a stock.

6 A -- then it's a situation where
7 semi-strong form efficiency would not --
8 would not be holding.

9 Q Anything else?

10 A Well, it also creates issues
11 with short selling in the sense that it
12 becomes very risky to short sell. Short
13 selling is an important mechanism that
14 helps with market efficiency, and so that
15 would be an important issue as well. I
16 mean, meme stock activity is going to
17 affect kind of the ability of investors to
18 incorporate information in the stock. And
19 so it's not going to incorporate
20 information as well as it would otherwise
21 and so affects directly market efficiency,
22 that one.

23 Q Anything else?

24 A I mean, those are the
25 important things that come to mind, that

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1 the price is going to be distorted, and
2 distorted prices kind of, by itself, is
3 an -- is an issue for market efficiency.
4 He hasn't looked at that. I mean, he had
5 some statements in his deposition on those
6 issues.

7 Q Who are we talking about?

8 I'm sorry.

9 Who are we --

10 A Dr. Feinstein.

11 Q Okay. Okay. I think --

12 A I'm --

13 Q -- your -- I think you've gone
14 off in a different direction. So if
15 you're done with that, I can move to a
16 different question. Because we weren't
17 talking about Dr. Feinstein.

18 A Well, my report is about
19 Dr. Feinstein.

20 Q Okay. Is it your opinion that
21 a meme stock can never be traded in an
22 efficient market?

23 MS. LOSEMAN: Object to form.

24 Vague. Incomplete hypothetical.

25 A I mean, one big issue with

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1 market efficiency is that a stock can be
2 trading inefficiently for some period of
3 time, could then trade efficiently, and
4 can become again inefficient. Now, with a
5 meme stock, you can have periods where
6 meme activity isn't important. And during
7 that period of time, it could be that the
8 stock is not distorted. It depends. So
9 one would have to study in the context of
10 a specific stock.

11 Q If a stock -- I'm sorry.

12 Strike that.

13 If a meme stock quickly
14 incorporates all public information, would
15 you still say it's inefficient?

16 MS. LOSEMAN: Object to form.

17 Incomplete hypothetical.

18 A I think it would depend.

19 Q And what would --

20 A I mean, it would depend on the
21 nature of meme activity, and it would
22 depend on kind of the information is a
23 price. Now, if the price is distorted by
24 that meme activity in ways that affects
25 the ability of investors to rely on the

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1 price generally, then that would be a
2 problem.

3 Q So you're talking about
4 fundamental efficiency, correct?

5 A I'm talking about market
6 efficiency.

7 Q What is your definition of
8 market efficiency?

9 A The ones that I have in my
10 report, which is semi-strong form
11 efficiency.

12 Q Okay. But then you said there
13 is -- if the price was -- you're
14 essentially saying if the price isn't the
15 true price, right?

16 A I'm saying if the price --
17 MS. LOSEMAN: Object to form.
18 Misstates.

19 THE WITNESS: I'm sorry.

20 MS. LOSEMAN: Go ahead.

21 A If the price is distorted in
22 such a way that you can predict future
23 returns, which is inconsistent with
24 semi-strong form market efficiency, then
25 that's an issue.

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1 the key question is whether information is
2 incorporated in the stock price.

3 Q No court has found that the
4 market for a meme stock is necessarily
5 inefficient; isn't that true?

6 A I have no idea.

7 MS. LOSEMAN: Objection to the
8 extent --

9 A I mean, I --

10 MS. LOSEMAN: -- it calls for
11 a legal conclusion.

12 Hold on. Let me get my
13 objection. Thank you.

14 A I'm not an attorney. I -- I
15 mean, I focus on the literature in
16 financial economics and what my colleagues
17 in financial economics are looking at.

18 Q And no peer-reviewed
19 publication says that a meme stock is, per
20 se, inefficient either; isn't that
21 correct?

22 MS. LOSEMAN: Objection.
23 Vague.

24 A I'm not sure what you mean by
25 "per se inefficient."

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1 Q That -- by referring to a meme
2 stock -- I'm sorry.

3 Strike that.

4 By referring to a stock as a
5 meme stock, that doesn't mean it
6 necessarily is inefficient, correct?

7 MS. LOSEMAN: Same objection.

8 A So I thought I answered that
9 question before, no?

10 I mean, a stock that can have
11 meme-type events at some point in time is
12 not necessarily efficient forever after.

13 Q And so it's possible that a
14 meme stock can trade efficiently?

15 MS. LOSEMAN: Objection.

16 Vague.

17 A I mean, I -- it would depend.
18 I mean, it would depend on what is shown
19 to me. Now, meme-type activity can create
20 substantial inefficiencies on -- I mean,
21 as I said, it's possible for that activity
22 to go to sleep for a period of time, and
23 then it could be, during that period of
24 time, that the stock is efficient or it
25 might not be. No. An important issue is

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1 that meme stock activity can make short
2 selling too risky.

3 And short shelling can be an
4 important mechanism for a stock to be
5 efficient. So one would have to look. It
6 would be dependent on the stock.

7 Q So in answer to my question,
8 then, it is possible that a meme stock
9 could trade efficiently?

10 MS. LOSEMAN: Objection.

11 Asked and answered. Vague.

12 A I think the answer was that I
13 was giving to that question is that there
14 can be period where a stock is still
15 affected -- I mean is still very popular
16 on social media where it could be
17 efficient. I think one would have to
18 study the stock to see whether that can be
19 the case. I can't exclude a priori that a
20 stock that at some point was identified as
21 a meme stock is going to stay a meme stock
22 forever.

23 Q Is it your opinion that the
24 Cammer-Krogman factors don't apply to meme
25 stocks?

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1 Vague.

2 A What I'm saying in my report
3 is that Dr. Feinstein now focuses on
4 GameStop, on AMC, and says that Cassava
5 didn't have that level of social media
6 activity, and he provides no basis as to
7 why that would be a benchmark. I use a
8 benchmark that, to me, seems to be
9 reasonable, which is looking at a study
10 that looks at a sample of meme stocks.
11 And I point out that Cassava has,
12 following -- during periods of time that
13 is similar to those stocks, and that that
14 makes it important for Dr. Feinstein to
15 pay attention to that phenomena.

16 Q So you sitting here, you
17 don't -- you don't have a threshold amount
18 in mind for how much social media interest
19 is required in -- for a stock to be a meme
20 stock?

21 MS. LOSEMAN: Objection.

22 Misstates. And vague.

23 A I mean, for the opinions that
24 I'm -- I have in my report, I don't need a
25 threshold. What I need is exactly what I

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1 present, which is a whole bunch of
2 evidence of the markets talking of Cassava
3 as a meme stock, of Cassava being included
4 in an index of meme stocks, and it having
5 some of the features of meme stocks
6 that -- of papers in the literature.

7 Q No court has determined what
8 minimum threshold of social media interest
9 is required for a stock to be a meme
10 stock; isn't that right?

11 MS. LOSEMAN: Objection.

12 Calls for a legal conclusion.

13 A I -- I mean, I don't -- I
14 don't know if courts have even looked at
15 stocks that somebody was calling a meme
16 stock. So I -- now, as I said, I'm not an
17 attorney. I mean, it would be interesting
18 to follow the reasoning of the court -- of
19 a court if it decided that a stock that is
20 in a meme stock index is somehow not a
21 meme stock. But now here, my argument is
22 quite different from what you seem to
23 think it is. My argument is that the
24 works that Dr. Feinstein did is incomplete
25 and problematic in reaching a -- or a

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1 conclusion of market efficiency, because
2 he ignored that there is a lot of evidence
3 that Cassava may have been affected by the
4 meme stock phenomenon, and he doesn't
5 study that in his report.

6 He -- I mean, at his
7 deposition seemed today that he has kind
8 of casually studied it, and -- but I
9 haven't seen any of the work underlying
10 this casual study.

11 MS. JENSEN: So I'm going to
12 move to strike everything after "I
13 don't know if courts have looked
14 at stocks that someone was calling
15 a meme stock."

16 Q Again, Doctor, I really
17 encourage you to focus on the question.
18 It's just going to make it very difficult
19 for us to get through this in seven hours
20 on the record if you continually go off
21 into different directions instead of
22 answering the questions that we've got
23 here.

24 MS. LOSEMAN: And we'll oppose
25 the motion and object to the

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1 offload their positions.

2 Q And that is a characteristic
3 of meme stocks?

4 A The short squeeze, to me, is
5 not a characteristic of meme stock. But
6 no, a number of meme stocks ended up
7 having short squeezes, and those that have
8 attracted considerable attention.

9 Q You mentioned retail ownership
10 in your report.

11 What's the threshold amount of
12 retail ownership in order for a stock to
13 be characterized as a meme stock.

14 MS. LOSEMAN: Objection.
15 Vague.

16 A I mean, I don't say that there
17 is a threshold of retail ownership. I
18 don't think that the definitions that we
19 talked about includes retail ownership.
20 It is striking, in the case of Cassava, as
21 to how low institutional ownership is and
22 that, I mean, creates a number of
23 difficulties.

24 Q Okay. So the retail ownership
25 itself isn't cause to call a stock a meme

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1 stock?

2 MS. LOSEMAN: Objection.

3 Vague.

4 A The level of ownership is not
5 a reason but obviously the meme stock
6 phenomenon is being driven by individuals
7 and not by institutions.

8 Q Are you aware of peer-reviewed
9 literature that social commentary may
10 enhance the efficiency of a stock's market
11 trading?

12 A I am aware of literature where
13 it says that it can help, and I am aware
14 of literature that says that it can -- it
15 can hurt. It depends on a number of
16 factors. On -- now, with -- as a meme
17 stock phenomenon, the view has been more
18 that it is hurting rather than enhancing.

19 Q So it's your opinion that
20 social commentary hurts market efficiency?

21 MS. LOSEMAN: Objection.

22 Misstates.

23 A I think you're misstating what
24 I said.

25 Q What is your opinion?

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1 A My -- I mean, what I said, in
2 answer, is that it depends. That, you
3 know, there are papers that focus on it
4 helping in some cases, and there are
5 papers that focus on it hurting. And it
6 depends on the circumstances. It can help
7 or it can hurt.

8 Q And how can it help?

9 A I mean, now, I am aware of
10 papers that discusses the fact that
11 information -- public information may be
12 incorporated more quickly for stocks
13 where -- that are located at places that
14 are more central in social networks. That
15 is a paper that comes to mind. Now -- and
16 so that would be -- would be an example of
17 how it could help in the sense that people
18 have access to that information in a
19 different ways than people that would be
20 remove from central -- I mean the
21 networks.

22 Q Do you opine in your report
23 that GameStop traded in an inefficient
24 market?

25 A I said -- I said Professor

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1 Fama, who says, at that point in time, he
2 traded very inefficiently.

3 Q Anything else in your report
4 about that?

5 A I mean, I don't have an
6 analysis of the efficiency of GameStop's
7 market in my report. I'm not quite sure
8 why you -- I should have such an analysis.
9 It obviously adds -- had lots of episodes
10 that are hard to reconcile with market
11 efficiency.

12 Q How about AMC?

13 Do you opine in your report
14 that AMC traded in an inefficient market?

15 A Again, AMC had lots of
16 episodes that are very hard to reconcile
17 with market efficiency, but, I mean, I did
18 not do a specific study for AMC. I did
19 not do a specific study for GME. You
20 know, I wasn't retained to assess the
21 market efficiency of those stocks. Now,
22 there's plenty of reasons in the
23 literature to be concerned about the
24 efficiency of those stocks.

25 Q But that's not your opinion?

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1 A I'm sorry.

2 What?

3 I don't --

4 Q But -- but --

5 A -- understand what you're
6 saying.

7 Q -- you don't have -- you --
8 because you didn't analyze those stocks,
9 you're not opining on the efficiency or
10 inefficiency of GME or AMC?

11 A As I --

12 MS. LOSEMAN: Objection.

13 Vague.

14 Go ahead.

15 A -- as I said, there are lots
16 of episode in those stocks that are hard
17 to reconcile with market efficiency. And
18 on -- so that's what I would say without
19 doing more. I mean, I know I reference
20 plenty of papers and plenty of discussions
21 showing that there are episodes that --
22 no. I would find it very hard to
23 reconcile with efficiency.

24 Q Did you do any event studies
25 of GameStop?

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1 A Not in the context of this
2 report.

3 Q You haven't done that for this
4 case, right?

5 A I don't see why I would have
6 done that for this case, yes.

7 Q So the answer is no?

8 A As I said.

9 Q AMC, did you do an event study
10 for AMC?

11 A Again, I did not. I mean, I
12 did everything that was required for me to
13 support the opinions that I have, and I'm
14 satisfied that I support my opinion.

15 Q Is it your opinion that
16 Cassava was a meme stock throughout the
17 class period?

18 MS. LOSEMAN: Object to form.
19 Vague.

20 A This misstates what I say in
21 my report. What I say in my report is
22 that Dr. Feinstein's opinion is
23 problematic because he did not investigate
24 the effects on Cassava, the potential
25 effect of Cassava of the meme stock

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1 phenomenon.

2 Q So you yourself do not have an
3 affirmative opinion that Cassava was a
4 meme stock throughout the class period?

5 MS. LOSEMAN: Objection.

6 Vague.

7 A No. What I have in my report
8 is what it is. I mean, I'm not quite sure
9 what you mean by "affirmative opinion."
10 Now, I provide lots of evidence that the
11 market thought of it as a meme stock --

12 (Whereupon, the court reporter
13 requested clarification.)

14 THE WITNESS: Thought of it as
15 a meme stock?

16 A And I provide evidence that is
17 consistent. I don't see why I would have
18 to do more in the context of questioning
19 what Dr. Feinstein did.

20 Q So I'm going ask it again.
21 Is it your opinion that
22 Cassava was a meme stock throughout the
23 class period?

24 MS. LOSEMAN: Objection.

25 Asked --

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1 Q Yes or no.

2 MS. LOSEMAN: -- asked and
3 answered.

4 A My answer is that there is
5 enough evidence from the markets, from the
6 press, from social media, from the
7 behavior of the stock itself to be
8 concerned that there was an impact from
9 the meme stock phenomenon, and that
10 Dr. Feinstein hasn't taken that into
11 account, hasn't studied that, hasn't paid
12 attention to that --

13 Q So sitting here --

14 A -- in his report.

15 Q -- so was -- was Cassava a
16 meme stock throughout the class period?

17 MS. LOSEMAN: Objection.

18 Asked and answered.

19 A I just told you what my
20 opinion is as it is discussed in my
21 report.

22 Q Well, I don't think I've
23 gotten a yes or no answer.

24 So yes or no, was Cassava a
25 meme stock throughout the class period?

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1 Q Okay. And yet -- still, it
2 was only efficient for a couple of days,
3 correct?

4 A You just mischaracterizes what
5 he said.

6 Q Okay. He said for a couple of
7 days, it was very inefficient, right?

8 A Very inefficient, yeah.

9 Q Okay.

10 A That doesn't mean that it was
11 efficient on the other days.

12 Q But that's all he referred to,
13 wasn't it?

14 MS. LOSEMAN: Object to form.
15 Document speaks for itself.

16 A I mean, it -- well, it says
17 very inefficient for a couple of days. I
18 mean -- I mean, it -- I don't know what he
19 would have said about other days for
20 GameStop. I don't know what he would have
21 said about what happened to GameStop this
22 year. I haven't asked him.

23 Q You haven't spoken to him
24 about this at all, have you?

25 A About GameStop?

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1 Q Yeah.

2 A I don't believe so. I mean,
3 I've communicate with him about other
4 things. I haven't asked him.

5 Q Okay. And that couple of days
6 that he was referring to, that was a short
7 squeeze that precipitated a trading ban,
8 correct?

9 A That's correct.

10 Q And that short squeeze was due
11 to coordinated trading by a crowd of
12 retail investors in that case, correct?

13 MS. LOSEMAN: Object to form.

14 Vague.

15 A I mean, some of the papers
16 make that case. Yes.

17 Q At no point during this
18 interview did Professor Fama mention
19 caba -- Cassava, right?

20 A I don't know what questions he
21 was asked, and so I'm sure he didn't
22 mention Cassava. But no, he responded to
23 the questions that were asked for him.

24 Q In the --

25 A -- he wasn't --

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1 Q -- rock --

2 A -- he wasn't asked to list the
3 stocks that may have traded inefficiently.
4 That wasn't part of the questions that I
5 remember.

6 Q That wasn't my question.

7 I was just asking to you
8 confirm that he didn't mention Cassava --

9 MS. LOSEMAN: Objection.

10 Document speaks for itself. Asked
11 and answered.

12 Q -- correct?

13 A Yeah. But the way you are
14 framing the question is problematic. Now,
15 it doesn't -- it doesn't mean that he had
16 an opinion about Cassava.

17 Q But that's not what I'm asking
18 you.

19 I'm just asking you a very
20 simple question, and that's to confirm
21 that he did not mention Cassava, correct?

22 MS. LOSEMAN: Objection.

23 Argumentative. Document speaks
24 for itself.

25 A I mean, Cassava is not

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1 time frame?

2 A No. So one of the discussions
3 in the media that I point out is that a
4 number of market observers thought that
5 what was happening to Cassava was a result
6 of that banning, that the investors that
7 were active in those stocks and moved on
8 to stocks like Cassava.

9 Q So that's unresponsive to my
10 question.

11 My question was Cassava ever
12 banned by retail broker-dealers in that
13 time frame?

14 MS. LOSEMAN: Objection.
15 Argumentative. Asked and
16 answered.

17 A I thought I answered the
18 question, that it wasn't banned, but that
19 the bans themselves discussed in the media
20 as reason why Cassava attracted attention
21 and attracted trading.

22 Q The thing you didn't say was
23 that it wasn't banned, or at least I
24 didn't hear it. So my apologies if you
25 did say that.

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1 Was there ever a cap put on
2 Cassava trading by retail broker-dealers?

3 MS. LOSEMAN: Objection.

4 Argumentative.

5 A No. Again, it's the same
6 thing. No, I mean, it -- kind of the
7 traders that were in the cap stock seem to
8 have moved to other stocks, and that's one
9 of the issues discussed in the media about
10 Cassava.

11 Q I want to broaden the time
12 frame now.

13 At any point in time was
14 Cassava trading banned by retail
15 broker-dealers?

16 MS. LOSEMAN: Objection.

17 Asked and answered.

18 A I'm not aware of a ban. I
19 mean, the bans that you are talking about
20 took place over a short period of time and
21 had to do with the level of capital that
22 was available to those dealers to support
23 clearing and so on.

24 Q Okay. And same answer as to
25 if I expand the time period on any caps?

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1 Would your answer be the same?

2 MS. LOSEMAN: Same objection.

3 A My answer would be -- would be
4 the same.

5 Q Okay. Now, did you find any
6 evidence of a coordinated short squeeze
7 amongst traders for Cassava during the
8 class period?

9 MS. LOSEMAN: Objection.

10 Outside scope.

11 A I did not go looking for it.
12 I mean, I am explicit about what I looked
13 at, and why what I looked at is important
14 for Dr. Feinstein's report. No, I'm -- I
15 don't have a report saying that Cassava is
16 a meme stock. I'm saying that there are a
17 number of indicia that indicates that
18 Cassava may have been influenced by the
19 meme phenomenon and Dr. Feinstein ignores
20 them.

21 Q Okay. Turning to another
22 portion of your report, you identify
23 September 20 and 22 of 2021 as dates that
24 are high social media, correct?

25 A Correct.

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1 Q And both sides -- both dates
2 have statistically significant residual
3 price increases, correct?

4 A Correct.

5 Q And you do agree there was
6 information that caused the stock price
7 increase on September 20th, right?

8 That was in Footnote 157.

9 A That's when there was a tweet
10 about information or potential information
11 about the SEC investigation.

12 Q And you -- do you assert that
13 there is no news that could explain the
14 stock price reaction on September 22nd?

15 A Well, I discuss that in my
16 report on -- and I point out that the
17 tweet was widely accessible and viewed on
18 September 22nd. There is an article on
19 Seeking Alpha that kind of reproduces that
20 information that is already public.

21 Q Do you contend that the
22 information on September 22nd was just
23 repetition of the information on
24 September 20th?

25 MS. LOSEMAN: Object to form.

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1 it's not going to be in the long run,
2 because it's not going to be fewer --
3 there's going to be fewer room -- less
4 room to short sell.

5 Q Okay. Are you done that with
6 that --

7 A Yeah.

8 Q -- answer?

9 Okay. Do you have in mind the
10 answer I asked after that or should I
11 re-ask it?

12 A I -- it would be helpful --

13 Q Okay.

14 A -- if you could --

15 Q All right. So did you draw
16 any conclusion in this case about whether
17 Cassava's stock price was being
18 artificially depressed by the short
19 interest in it?

20 A Well, it wouldn't be
21 artificially depressed. Now, if people
22 cannot sell short as much as they would
23 like, the stock is going to be inflated.

24 Q Did you make any findings one
25 way or the other about that in this case?

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1 A Well, I provide evidence based
2 on the current state of the financial
3 economics literature that Cassava had high
4 short selling given its low institutional
5 ownership. And that as a result, short
6 selling was constrained using the criteria
7 of the literature and that that's not
8 helpful to market efficiency. Now, we
9 know, from the financial economics
10 literature, that in those situations
11 information gets incorporated more slowly
12 in a stock price.

13 Q So I think we're missing each
14 other because that was -- you're answering
15 a different question than I asked.

16 My question was whether you
17 made any findings as to whether Cassava's
18 stock price was artificially depressed by
19 the short interest in it. That was my
20 question.

21 MS. LOSEMAN: Objection.

22 Vague. And I think asked and
23 answered.

24 But go ahead.

25 A So I thought I answered the

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1 question. Now, the -- what I point to, in
2 terms of the limitations of short selling,
3 would imply that the stock is inflated,
4 not that is -- that it is depressed.

5 Q Did you make any findings
6 about that?

7 Did you make any findings
8 about actual depression or inflation?

9 A I did not --

10 MS. LOSEMAN: Objection.

11 A I did not make findings about
12 inflation or depression. I made the
13 finding that, well, Cassava was in a
14 situation where short sales were
15 constrained, and I base this conclusion on
16 the literature. And I show that the
17 literature implies that, in those
18 situations, public information is
19 incorporated more slowly in a stock. So I
20 show all this and point out that
21 Dr. Feinstein didn't address this issue.
22 He discusses short selling in his
23 deposition, but in a way that is
24 completely contrary to the existing
25 literature.

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1 MS. JENSEN: Move to strike
2 everything after "I did not make
3 findings about inflation or
4 depression."

5 MS. LOSEMAN: Oppose the
6 motion.

7 MS. JENSEN: Okay. Let's go
8 ahead and take a quick break.

9 VIDEOGRAPHER: The time is
10 2:17 p.m. We're now off the
11 record.

12 (Whereupon, at 2:17 p.m., a
13 recess was taken to 2:44 p.m.)

14 (The proceeding resumed with
15 all parties present.)

16 VIDEOGRAPHER: The time is
17 2:44 p.m. We're now on the
18 record.

19 Q Okay. Welcome back.

20 All right. Doctor, Are there
21 any alternatives to shorting a stock?

22 MS. LOSEMAN: Object to form.
23 Vague.

24 A It's possible to trade with
25 options.

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1 A I describe it in -- as a
2 report and it's an index that as I look at
3 social media interest as well as short
4 sales.

5 Q And what are the criteria for
6 inclusion in that index?

7 A The ones I know are the ones
8 that I discuss in my report, and in that
9 case we know exactly the stocks in the
10 index. Cassava was in the index. So we
11 were able to remove Cassava and look at it
12 that way.

13 Q Okay. I don't think you
14 answered my question.

15 I said what are the criteria
16 for inclusion in the index?

17 MS. LOSEMAN: Objection.

18 Asked and answered.

19 Q It wasn't answered.

20 A So I said that it looks at
21 stocks that have high social media, I
22 mean, interest and high short sales is my
23 recollection.

24 Q Okay. And what level of
25 social media interest did it have to be?

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1 A That, I don't remember.

2 Q And do you know if there's any
3 objective criteria?

4 MS. LOSEMAN: Objection.

5 Vague.

6 A That, I don't know. That's
7 how they characterize the index.

8 Q And what was the criteria for
9 short sells.

10 A Same thing. That's the way
11 they describe the index.

12 Q So how many days throughout
13 the entire class period did Cassava
14 qualify for inclusion in this index?

15 A So the stock wasn't -- I mean,
16 I'm sorry.

17 The index wasn't available
18 during the whole class period. The index
19 came into being at the end of 2021. So it
20 really wasn't available in 2021.

21 Afterwards, it was -- Cassava was in the
22 index on, you know, sometimes it dropped
23 out, and sometimes it came back in.

24 Q And do you know how many days
25 in total it was in there?

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1 A No.

2 Q You have no idea, sitting
3 there?

4 MS. LOSEMAN: Objection.

5 Asked and answered.

6 A Sitting here, I don't
7 remember. I know that -- I knew that at
8 one point in time. I'm not sure whether I
9 put it in the report or not.

10 Q Do you know what percentage of
11 the total class period it was included in
12 the index?

13 A Well, given that the index
14 didn't exist for a year and a half in the
15 class period and existed for two years, I
16 mean, I have a sense of an upper bound in
17 the percentage. You know, the fact that
18 the index didn't exist is quite important
19 to that.

20 Q Okay. What percentage once it
21 exists, so for the rest of the remainder
22 of the period?

23 A So I'm trying to see whether
24 I -- but I -- I don't see the data in my
25 report. I know that we have it, and I

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1 know that it should be in my backup.

2 Q How often is that index
3 rebalanced?

4 A My understanding is every two
5 weeks.

6 Q And is that how often
7 Solactive modifies the constituents of the
8 index?

9 A It seems to modify the
10 constituents fairly often. I don't know
11 if it's every two weeks or not.

12 Q Would you be surprised to know
13 that the constituents of that index
14 changed 1,153 times from its inception to
15 the end of the class period?

16 MS. LOSEMAN: Objection.

17 Assume facts. Vague.

18 A I would have to check.

19 Q You have no reason to dispute
20 that?

21 MS. LOSEMAN: Same objections.

22 A It's the only number I know.
23 So at this point I would -- I would have
24 to check.

25 Q Is that a typical turnover for

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1 an index?

2 MS. LOSEMAN: Objection.

3 Vague.

4 A It depends.

5 Q Depends on what?

6 A Well, I mean, the kind of
7 indices that replicate -- I mean, indices
8 that have a buy and hold. This is an
9 index for an ETF on -- so it's an ETF that
10 was constructed out of this index. There
11 are many ETFs that, you know, have kind of
12 their own indices that they try to track,
13 but the constituents change over time. So
14 it really depends on the type of index.

15 Q How many constituents are in
16 this index at any given time?

17 A Twenty-five is my
18 understanding.

19 Q And if a company doesn't meet
20 the criteria for the inclusion in the
21 index, does it mean the stock is not a
22 meme stock?

23 MS. LOSEMAN: Object to form.

24 Vague.

25 A I wouldn't reach that

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1 conclusion. I mean, the point of
2 mentioning that index is that it's an
3 index of meme stocks, and at times, it
4 included Cassava.

5 Q And so in your mind, whether
6 it's included or not doesn't necessarily
7 mean whether a stock is a meme stock,
8 correct?

9 MS. LOSEMAN: Objection.

10 Misstates.

11 A Well, that's correct. I mean,
12 it's one of the indices that I refer to in
13 my report, and as we keep talking about, I
14 have a number of indices that indicates
15 that -- you know, that indicates that the
16 meme stock phenomenon may have affected
17 Cassava, and Dr. Feinstein doesn't look at
18 that.

19 MS. JENSEN: The beginning of
20 that answer was "Well, that's
21 correct."

22 Q Okay. What is an "option
23 contract"?

24 A An option contract is a
25 contract that gives you the right to buy

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1 or sell a stock at a given price, the
2 exercise price.

3 Q And you'll agree that options
4 are derivative?

5 A Yeah.

6 Q Aren't options designed to
7 move with the stock?

8 MS. LOSEMAN: Object to form.
9 Vague and incomplete.

10 A Well, options at the times
11 that they can be exercised are not -- I
12 mean, European options at maturity
13 would -- reflects a difference between the
14 stock price and the exercise price.

15 Q So I think my question is a
16 little different.

17 My question was whether
18 options are designed to move with the
19 stock?

20 MS. LOSEMAN: Same objection.
21 Asked and answered.

22 A I thought I gave the answer to
23 your question. So there must be something
24 about your question I don't understand.

25 Q Or something about your answer

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1 I don't understand certainly.

2 But the options are
3 derivative. We have established that.

4 And options are designed to
5 move with the stock; that's the design of
6 the product, correct?

7 MS. LOSEMAN: Same objections.

8 A The design of the product is
9 that at the time of exercise, it's going
10 to depend directly on the stock price.

11 Q Are you familiar with the
12 literature on options pricing?

13 A I have written papers on
14 option pricing.

15 Q And you are aware that there's
16 numerous tests of options pricing models?

17 A I am aware of that, both
18 because I have written about it and
19 because I have taught it.

20 Q And those tests generally
21 indicate that options pricing conform to
22 fair, fundamental values?

23 MS. LOSEMAN: Object to form.

24 Vague.

25 A I'm not sure what this means.

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1 Is that -- let's talk about
2 call options.

3 Now, isn't it -- isn't it true
4 that, according to generally accepted
5 principles of options pricing, that if the
6 stock is inflated, then all the options
7 would also be inflated?

8 MS. LOSEMAN: Objection.

9 Vague. Incomplete hypothetical.

10 A So I'm not sure what you mean.
11 I mean, one -- I only have to qualify my
12 earlier answers. Now, when you talk about
13 a stock like Cassava, for some investors,
14 it's kind of viewed as a gambling stock on
15 being able to take positions with -- in
16 calls with a high exercise price might be
17 a cheap way to participate in big changes
18 in prices. So, I mean, you might have
19 actions that is produced in other stocks,
20 say, Apple or something like that.

21 Q Okay. And you're speaking
22 hypothetically, right?

23 A No, I'm speaking from kind of
24 my general understanding of different
25 types of stocks.

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1 Q Right. Now, my question about
2 call options, I don't think you answered
3 that question.

4 A No. I was going to.

5 Q Okay. Go ahead.

6 A Now, again, the answer depends
7 on frictions to arbitrage. Now, options
8 can be priced correctly relative to the
9 stock irrespective of whether the stock is
10 overvalued or undervalued. Because the
11 value of options doesn't depend on whether
12 the stock is overvalued or undervalued, it
13 just depends on the stock price. But that
14 requires -- not that there are no
15 frictions -- or not material frictions in
16 arbitrage.

17 Q Wouldn't it be true, also,
18 according to general accepted pricing
19 models, that the stock is inflated
20 regardless of expiration rates and strike
21 prices, then the call prices will also be
22 inflated?

23 MS. LOSEMAN: Objection.

24 Vague. Incomplete hypothetical.

25 A I think it depends on the

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1 definition of inflations that you have in
2 mind here. Now, if the stock is inflated
3 and you are able to arbitrage between call
4 options on the stock, and then know the
5 option is going to be priced fairly
6 regardless of whether the stock is priced
7 fairly or not. I think there is an issue
8 that I need to raise with respect to my
9 earlier answers in terms of arbitraging.

10 Now, you have different types
11 of stocks, and the Black-Scholes types of
12 reasoning is going to work reasonably for
13 stocks whose price evolve smoothly over
14 time, you know, the specific technical
15 requirements for that. If a stock doesn't
16 evolve smoothly, now it has jumps in its
17 price, then arbitraging between the stock
18 on the option price is going to be much
19 more challenging because you won't be able
20 to kind of construct that with class
21 portfolio between an option on the stock
22 by just hedging the option with a stock.

23 And then the answer to your
24 questions would be a bit different. Now,
25 when we talk about Cassava, it's precisely

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1 viewed as material for shareholders.

2 Q And are you aware that that's
3 how the SEC describes 8-K filings?

4 MS. LOSEMAN: Objection.

5 Assumes facts.

6 A In the way that I just
7 described it.

8 MS. JENSEN: Okay. I'm going
9 to ask that you mark this document
10 as Stulz Exhibit 5, and this is a
11 printout from the SEC website.

12 (Whereupon, a Printout from the
13 SEC was marked as Deposition
14 Exhibit No. 5 for
15 identification, as of this
16 date.)

17 Q Have you seen this document
18 before?

19 A I have seen -- yeah, I have
20 seen that. Not recently. So I have to --

21 Q So you can -- just to save a
22 little time, you can confine your review
23 or you can review it all, if you would
24 like, but I wanted to direct your
25 attention to the top of that first page.

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1 And do you recognize the
2 language I just used concerning the
3 purpose of an 8-K?

4 MS. LOSEMAN: Object to form.
5 Misstates.

6 A It includes the language of
7 major events that you read?

8 Q Yes. Okay. You can set that
9 aside. Now, Professor Feinstein's event
10 study established that the frequency of
11 statistically significant residual returns
12 for Cassava were statistically
13 significant -- were statistically
14 significantly greater on 8-K days than on
15 lesser news dates during the class period.

16 You don't dispute that
17 Professor Feinstein's collective study
18 established the frequency of statistically
19 significant residual returns for Cassava
20 stock were statistically greater on these
21 top news article dates during the class
22 period, do you?

23 A I don't dispute that he found
24 eight out of 45 8-K announcement to be
25 statistically significant, which means 37

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1 announcements were not statistically
2 significant.

3 Q I'm sorry. I just couldn't
4 understand. Could you say that again.

5 A Yeah. My understanding is
6 that he found about 20 percent of the
7 announcement statistically significant;
8 80 percent are not.

9 Q Okay. And --

10 A So if there are truly major
11 events, that would be an issue.

12 Q Now, is it your opinion that
13 your Exhibit 4A establishes that Cassava
14 traded in a non-efficient or inefficient
15 market?

16 A I'm sorry. We're going back
17 to kind of earlier questions?

18 Q Yeah, we're --

19 A I mean, if I had an exhibit
20 that establishes that Cassava traded in an
21 inefficient market, I would have an
22 affirmative opinion that it traded in an
23 efficient market.

24 Q Okay. So the answer is no.

25 MS. LOSEMAN: Object to form.

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1 Asked and answered. Misstates.

2 Q Right? The answer is no?

3 A I mean, the answer is that I'm
4 establishing evidence that is problematic
5 for the opinion of Dr. Feinstein's that
6 the market for Cassava is efficient. I
7 viewed the fact that 80 percent of the 8-K
8 announcements are not accompanied by
9 significant abnormal returns to be one
10 such piece of --

11 (Whereupon, the court reporter
12 requested clarification.)

13 THE WITNESS: -- significant
14 abnormal returns to be a piece of
15 evidence as well.

16 MS. JENSEN: So I'm going to
17 strike that as nonresponsive.

18 Q The answer to my question is
19 no correct?

20 MS. LOSEMAN: Object to the
21 motion. Asked and answered.

22 Q No?

23 A I thought I answered the
24 question.

25 Q Okay. With a no?

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1 opinion at this time that there is a
2 mismatch between the misrepresentations
3 and the corrective disclosures?

4 MS. LOSEMAN: Objection to the
5 extent it calls for a legal
6 conclusion.

7 A I am explaining, in my section
8 on the damages methodologies, that there
9 are a number of issues concerning how
10 Dr. Feinstein would assess the inflation
11 band for specific misstatements giving the
12 alleged curative disclosures. So I
13 have --

14 (Whereupon, the court reporter
15 requested clarification.)

16 THE WITNESS: Alleged curative
17 disclosures.

18 A So I formulate that as an
19 opinion concerning misstatements; I raise
20 questions about how it's going to deal
21 with computing the inflation band for the
22 various types of allegations.

23 Q Okay. I just want to make
24 sure that I understand what you are
25 saying. You're saying that you are -- if

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1 I'm -- if I'm understanding what you are
2 saying, your testimony, you're critiquing
3 Dr. Feinstein on the inflation ribbons,
4 but you are not providing the affirmative
5 opinion that there is a mismatch between
6 the misrepresentations and the corrective
7 disclosures at this time?

8 MS. LOSEMAN: Same objection.

9 A In my damages sections, I am
10 raising issues that Dr. Feinstein doesn't
11 address in his report that create issues
12 about computing inflation bands. I'm not
13 having a statement saying something to the
14 effect that an alleged curative disclosure
15 is unrelated to the misstatements or
16 something like that.

17 Q Would you agree that
18 out-of-pocket damages methodologies is the
19 damages methodology used in nearly every
20 class action securities case?

21 MS. LOSEMAN: Objection to the
22 extent it calls for a legal
23 conclusion.

24 A I don't view it as a
25 methodology; I view it as a definition of

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1 damages.

2 Q It is called the out-of-pocket
3 damages methodology.

4 And you agree that that's
5 what's used in nearly every securities
6 case?

7 MS. LOSEMAN: Objection.

8 A I mean, I agree that it's a
9 definition of damages, looking at the
10 difference between the two prices. I
11 agree that that's a definition of damages.
12 It's not a -- I mean, it's not a
13 methodology in the sense of telling me how
14 somebody would compute that amount.

15 Q An event study can be used to
16 measure the amount of artificial inflation
17 in a securities market price; isn't that
18 right?

19 MS. LOSEMAN: Objection.

20 Vague. Incomplete.

21 A There are cases where an event
22 study can be used, and there are cases
23 where it cannot. Here, we have the added
24 complication that there may be the impact
25 of the meme activity on abnormal returns

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1 that one would have to figure out what to
2 do with.

3 Q So are you saying an event
4 study is incapable of measuring damages in
5 this case?

6 Is that your position?

7 MS. LOSEMAN: Objection.

8 Misstates.

9 A I am -- didn't say that. I
10 thought you asked a very general question,
11 and I said sometimes an event study can be
12 used and sometimes it cannot.

13 Q I understand, but then you
14 pivoted to this case so that's why I did
15 as well.

16 A Okay. I just added that this
17 case has a complication that is not
18 typical having to do with the meme
19 activities that may or may not have
20 affected abnormal returns. And if it did,
21 then that's going to be an issue for what
22 Dr. Feinstein does at the merit stage, if
23 there is a merit stage.

24 Q So would you agree that --
25 assuming it's handled correctly,

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1 confounding information can be accounted
2 for in an out-of-pocket methodology?

3 MS. LOSEMAN: Objection.

4 Vague. Incomplete.

5 A I mean, there are cases where
6 confounding information can be taken into
7 account in a reliable way, and there are
8 cases where it cannot. Now, if there is
9 evidence of meme activity for the abnormal
10 return, not that you normal returns that
11 were influenced by the meme phenomenon.
12 That could be quite challenging for
13 Dr. Feinstein to find a way that is
14 reliable to deal with that.

15 Q Okay. And again, confirming
16 that you have not made a finding that
17 the -- that the abnormal returns were
18 influenced by the meme stock phenomena in
19 this case, correct?

20 MS. LOSEMAN: Object to the
21 extent it misstates.

22 THE WITNESS: I'm sorry. I
23 didn't hear.

24 MS. LOSEMAN: No. Go ahead.

25 A Oh, I raise a number of

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1 make a difference?

2 MS. LOSEMAN: Objection.

3 Asked and answered.

4 A As I said, it could make a big
5 difference. The abnormal return could be
6 quite different, but I mean, I don't know
7 what he's going to do. I don't know how
8 he's going to address that.

9 Q And you haven't made the
10 finding that it would be different?

11 A It's not --

12 MS. LOSEMAN: Objection.

13 Asked and answered.

14 A It's not -- it's not my role
15 to address the issue for him.

16 Q All I'm asking, Doctor, is for
17 you to confirm that you have not made a
18 findings that the stock would have fallen
19 less if the company made the disclosure
20 rather than the Wall Street Journal and
21 New York Times?

22 MS. LOSEMAN: Objection.

23 Asked and answered.

24 A I haven't done that type of
25 calculation at this point.

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1 Q Okay. So you're not saying at
2 this point that because the information
3 came from the Wall Street Journal and the
4 New York Times, investors lost more money?

5 MS. LOSEMAN: Objection.

6 Misstates. Asked and answered.

7 A I thought I had answered the
8 question. I know, I mean, there are a
9 number of issues here that make it
10 difficult to understand how it would come
11 up with a but-for disclosure on how it
12 would estimate the impact of that but-for
13 disclosure. That's -- now that's what I'm
14 saying here.

15 Q Are you aware of what the news
16 about the company was on July 27, 2022?

17 A July 27, 2022?

18 Q Uh-huh.

19 A At this point, I would need my
20 memory to be reflect of --

21 Q So I can -- I can just help
22 you refresh your recollection. Reuters
23 published a story revealing that the
24 Department of Justice had opened a
25 criminal investigation into Cassava

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1 involving whether the biotech company
2 manipulated research results for its
3 experimental Alzheimer's drug?

4 A So I have read the Reuters
5 article, so I know the article.

6 Q Is that important news?

7 MS. LOSEMAN: Objection.

8 Vague.

9 A Well, I mean, it is -- it is
10 news, and it is potentially important.

11 Q Was it positive or negative?

12 MS. LOSEMAN: Objection.

13 Vague.

14 A I mean, I haven't done the
15 analysis of kind of what was already known
16 on about this --

17 (Whereupon, the court reporter
18 requested clarification.)

19 THE WITNESS: On what was
20 already known before that.

21 A An unexpected announcement
22 that there is an investigation by the
23 Justice Department is going to have
24 negative impact on -- it might have a
25 negative impact even if it wasn't true

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1 that there was a problem.

2 Q Would you agree that the stock
3 price declined by a statistically
4 significant amount?

5 A Let me just check what I'm
6 saying about the date. I believe so, but
7 I just want to be -- yeah, just one thing
8 that I need to make precise and I haven't.
9 When I say that something has a
10 significant abnormal return, that's using
11 the models of Dr. Feinstein, and I make it
12 clear that in my reports that I am not
13 saying that I would use those models
14 myself if I had -- were doing an event
15 study myself.

16 Q Okay. But you have no reason
17 to dispute that the stock price declined
18 by a statistically significant amount?

19 A I declined by a -- by a fairly
20 large amount. So it would be surprising
21 if it were insignificant in an event
22 study.

23 Q So doesn't that mean that the
24 stock reacted to the information that was
25 released?

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1 MS. LOSEMAN: Object to form.

2 A As I said, I mean, the stock
3 of a company is likely to react negatively
4 whenever the DOJ starts a criminal
5 investigation, even if at the end of the
6 day nothing criminal was done.

7 Q Are you aware of what the news
8 was on this company, August 27, 2021?

9 MS. LOSEMAN: Object to form.
10 Vague.

11 A I mean, if --

12 Q I can tell you, if you want.

13 A That's Quanterix's issued -- I
14 mean, Quanterix's issued statement, yes.

15 Q And was this important news?

16 MS. LOSEMAN: Object to form.
17 Vague.

18 A I mean, it is a statement that
19 may or may not have corrected something
20 that Cassava said.

21 Q Was it positive or negative
22 news?

23 MS. LOSEMAN: Object to form.
24 Vague.

25 A I mean, if it corrected

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1 information that the market had viewed as
2 positive, said by Cassava, then it
3 wouldn't be positive news.

4 Q And would you agree that the
5 stock price declined by a statistically
6 significant amount?

7 A In Dr. Feinstein's event
8 study, it declined on those days. I agree
9 with that.

10 Q And you don't have any reason
11 to dispute that?

12 A That I read the numbers
13 correctly in Dr. Feinstein's spreadsheet
14 whenever I looked at a spreadsheet. It
15 was in a spreadsheet.

16 Q And so doesn't that also in
17 this instance mean that the stock reacted
18 to the information that was released?

19 MS. LOSEMAN: Object to form.

20 Vague.

21 A I would have to look at --
22 now, I also looked at information for
23 confounding information. At this point in
24 the day, I don't remember in detail what
25 I -- what I found for each date. So I

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1 would need to check that.

2 Q Sitting here now, you're not
3 aware of any?

4 MS. LOSEMAN: Object to form.

5 A I'm sorry. We were talking
6 about August 27th?

7 Q Yes.

8 A So it looks like I didn't look
9 at abnormal returns I -- for the days that
10 were significant. I looked at confounding
11 information for the days that were not
12 significant.

13 Q So in answer to my question,
14 doesn't that mean that the stock reacted
15 to the information that was released?

16 MS. LOSEMAN: Object to form.

17 Misstates.

18 A There is a negative abnormal
19 return on that day. Not to reach a
20 complete conclusion, one would have to
21 look at whether there is other information
22 on that day. I don't remember other
23 information at this point in time.

24 Q And so you are not aware of
25 any reason to dispute that the stock

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1 trying to get him to say he's not
2 aware of something. And he --

3 MS. JENSEN: I'm --

4 MR. GREENE: -- may be aware
5 but doesn't have a recall.

6 MS. JENSEN: Counsel --

7 MR. GREENE: And that's been
8 his answer.

9 MS. JENSEN: No, Counsel,
10 that's -- we don't need the
11 coaching on the fly here.

12 MS. LOSEMAN: That is not
13 coaching. That is a clear
14 objection to the question you've
15 asked five or six times now when
16 you know the witness is trying to
17 make a flight. You assured the
18 witness he would be able to make
19 his flight despite counsel having
20 taken nearly three hours of breaks
21 today.

22 MS. JENSEN: Now you're
23 misstating the facts. The witness
24 has been --

25 MS. LOSEMAN: Well, the

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1 transcript will record the times
2 that we took breaks.

3 MS. JENSEN: -- filibustering
4 all day. It's a simple question.

5 Q I'm just asking you to confirm
6 that, sitting here right now, you cannot
7 think of another reason that the stock
8 moved on that day?

9 MS. LOSEMAN: That is
10 different than reflection.

11 Objection. Asked and answered
12 several times.

13 Go ahead.

14 A Sitting here today, I don't
15 remember what other news was on that day,
16 and I would have to look at that.

17 Q See, that was easy. Okay.

18 Are you aware of what the news
19 on the company was on September 14, 2020?

20 MS. LOSEMAN: Object to the
21 commentary.

22 A September -- I mean, that's
23 the beginning of the class. That's
24 information related to the Trial 1 -- 2b.

25 Q And was this important news?

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1 MS. LOSEMAN: Object to form.

2 Vague.

3 A I'm sorry?

4 Q Was it important news?

5 A Well, it was -- well, it
6 certainly was news indicating that the
7 drug was on a trajectory where it could
8 keep moving forward.

9 Q And so it was important news?

10 MS. LOSEMAN: Object to form.

11 Vague. Asked and answered.

12 A In that sense, it was
13 important news.

14 Q Thank you. Was it positive or
15 negative news?

16 MS. LOSEMAN: Object to form.

17 Vague.

18 A The stock price increased on
19 that day. The analysts had positive
20 comments about what was going on.

21 Q So you agree that the stock
22 price rose by a statistically significant
23 amount on that day?

24 A I mean, I haven't done the
25 event study myself. My recollection is

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1 that it rose significantly in
2 Dr. Feinstein's study.

3 Q And doesn't that mean that the
4 stock reacted to the information that was
5 released on that day?

6 MS. LOSEMAN: Object to form.
7 Vague.

8 A What is correct is that
9 Cassava had information on that day on --
10 that was positive about Phase~2b of the
11 development of its drug and that the
12 market reacted to that.

13 Q Okay. Okay. No further
14 questions at this time.

15 BY MS. LOSEMAN:

16 Q I have one very, very brief
17 question. If you turn to your report,
18 sir, Plaintiffs' Exhibit 1.

19 A Uh-huh.

20 Q Before I get to the report,
21 you were asked questions earlier today
22 about the meaning of Twitter impressions.

23 Do you recall those questions?

24 A Yes.

25 Q And you did not have your

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1 report in front of you at the time. Would
2 you turn to page 22, Footnote 100.

3 A Yes.

4 Q And do you see at the end of
5 the footnote, there is a reference to the
6 source social media management --

7 A Yes.

8 Q -- and in parens a definition
9 of impressions.

10 Do you see that?

11 A Yes.

12 Q Is that the understanding of
13 impressions that you had at the time that
14 you authored this report?

15 A It is my understanding.

16 Q And reading it now, does that
17 reflect your recollection as to what
18 "impressions" are?

19 A Yes.

20 Q And what are "impressions"?

21 A So it's a lifetime number of
22 views on the post.

23 MS. LOSEMAN: No further
24 questions at this time.

25 MS. JENSEN: Thank you for

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